



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/695,390

10/29/2003

Sang-Hyuck Ha

45982

6829

7590

01/16/2009

Peter L. Kendall
Roylance, Abrams, Berdo & Goodman, L.L.P.
Suite 600
1300 19th Street, N.W.
Washington, DC 20036

EXAMINER

TORRES, JOSEPH D

ART UNIT

PAPER NUMBER

2112

MAIL DATE

DELIVERY MODE

01/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/695,390	Applicant(s) HA ET AL.	
	Examiner Joseph D. Torres	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16,33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16,33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 May 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/12/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-16, 33 and 34 have been considered but are moot in view of the new ground(s) of rejection.

The Applicant contends, "Further, Applicants point out that an exact relationship between "calculating an address compensation factor" and "a column formed with the real value of the remainder R" need not be recited in the claims. MPEP § 2173.04 states that "breadth of a claim is not to be equated with indefiniteness".

The Examiner disagrees and asserts that claim 1 is not rejected due to breadth but is rejected for a complete lack of any relationship. The term "*in accordance with*" in claim 1 is a relative term which renders the claim indefinite. The language in claim 1 only warns that a relationship exists but fails to recite what that relationship is and fails to recite any step resulting from such relationship that limits a method.

The Applicant contends, "First, the Examiner does not distinctly point out what the Examiner believes the present invention is directed towards and specifically why it doesn't meet the requirements of 35 U.S.C. 101, as required by MPEP".

That is incorrect. The Examiner has explicitly pointed out the claims are directed to an abstract method for calculating an address to read abstract data out of a matrix array. The method can be performed entirely in software or by hand.

The Applicant contends, “It seems that in one argument, the Examiner considers claim 1 to be simply a mathematical algorithm for rearranging data. Another argument seems to reject claim 1 because it is allegedly directed to an abstract idea, law of nature or natural phenomenon. A third argument states that claim 1 allegedly lacks function or utility and is thus nonstatutory”.

The Examiner disagrees and asserts that the Examiner only provides one argument: the claims are directed to an abstract method for calculating an address to read abstract data out of a matrix array. The method can be performed entirely in software or by hand.

The claims as written attempt to gain a patent on every “substantial practical application” of an abstract mathematical algorithm/idea.

The courts have also held that a claim may not preempt< ideas, laws of nature or natural phenomena. The concern over preemption was expressed as early as 1852. See *Le Roy v. Tatham*, 55 U.S. 156, 175 (1852) (“A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.”); *Funk Brothers Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 132, 76 USPQ 280, 282 (1948) (combination of six species of bacteria held to be nonstatutory subject matter).

**>Accordingly, one may not patent every “substantial practical application” of an idea, law of nature or natural phenomena because such a patent would “in practical effect be

Art Unit: 2112

a patent on the [idea, law of nature or natural phenomena] itself.” *Gottschalk v. Benson*, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

The Applicant contends, “Claim 1 clearly recites a method for reading code symbols to decode an encoder packet in a receiver wherein the method comprises steps for generating a read address for the code symbol by adding an interim address and an address compensation factor, and reading the code symbol”.

The Examiner disagrees and asserts that “to decode an encoder packet in a receiver” is intended use: the claim limitations themselves are directed to an abstract method for calculating an address to read abstract data out of a matrix array. The method can be performed entirely in software or by hand.

The Applicant contends, “At the least, the step of reading the code symbol is clearly not a mathematical operation”.

The Examiner asserts “the step of reading the code symbol” out of an abstract matrix array is an abstract step for an abstract mathematical algorithm of calculating an address to read abstract data out of a matrix array. The claim limitations of claim 1 are still directed to an abstract method for calculating an address to read abstract data out of a matrix array.

The Applicant contends, “Additionally, the step of generating an address compensation factor cannot be considered solely a mathematical operation as it

Art Unit: 2112

comprises a determination of whether to increase an address compensation factor or decrease an address compensation factor based on a decision made in generating the interim address, as understood in view of the specification and recited in claim 3".

The Examiner asserts that claim 1 does not recite, "a determination of whether to increase an address compensation factor or decrease an address compensation factor based on a decision made in generating the interim address", but even if it did; "a determination of whether to increase an address compensation factor or decrease an address compensation factor based on a decision made in generating the interim address" is an abstract step for an abstract mathematical algorithm of calculating an address to read abstract data out of a matrix array. The claim limitations of claims 1-16, 33 and 34 are still directed to an abstract method for calculating an address to read abstract data out of a matrix array.

The Applicant contends, "For an invention to be "useful" it must satisfy the utility requirement of section 101, that is the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. Claim 1 clearly recites a specific practical application that is both substantial and credible. (i.e. reading code symbols to decode an encoder packet wherein the decoder packet contains a number of code symbols such that the number does not make up a completely uniform matrix)".

That the abstract method for calculating an address to read abstract data out of a matrix array can be useful does not mean calculating an address to read abstract data out of a matrix array done solely for the purpose of calculating an address and reading

Art Unit: 2112

abstract data out of an abstract matrix array provides nay utility. Since the claims themselves are only directed to calculating an address and reading abstract data out of an abstract matrix array, the claims themselves by themselves do not provide any utility unless they are used in some other useful algorithm not recited in the claims and probably not taught in the specification. The claim limitations of claims 1-16, 33 and 34 are still directed to an abstract method for calculating an address to read abstract data out of a matrix array.

The Applicant contends, "As stated in MPEP 2106, the tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. The MPEP states that the opposite meaning of "tangible" is "abstract." Applicants submit that independent claim 1 recites more than just an abstract idea, law of nature or natural phenomenon such as reading a code symbol for decoding an encoder packet at an address generated in part by calculating an address compensation factor. Further, Applicants submit that the calculation of an address compensation factor for generating a read address and reading the code symbol at the address are real world results."

That the abstract method for calculating an address to read abstract data out of a matrix array can be useful in real world applications does not mean calculating an address to read abstract data out of a matrix array done solely for the purpose of calculating an address and reading abstract data out of an abstract matrix array provides nay utility. Since the claims themselves are only directed to calculating an

Art Unit: 2112

address and reading abstract data out of an abstract matrix array, the claims themselves by themselves do not provide any utility, do not teach any connection to real world applications and unless they are used in some other useful algorithm not recited in the claims and probably not taught in the specification. The claim limitations of claims 1-16, 33 and 34 are still directed to an abstract method for calculating an address to read abstract data out of a matrix array.

The Applicant contends, "In other words, as stated in MPEP 2106, the opposite of "concrete" is unrepeatable or unpredictable. Applicants respectfully submit that the reading of a code symbol from a read address generated by adding the interim address and the address compensation factor for the code symbol is a repeatable and predictable result".

However, the claim limitations of claims 1-16, 33 and 34 are still directed to an abstract method for calculating an address to read abstract data out of a matrix array. The claims as written attempt to gain a patent on every "substantial practical application" of an abstract mathematical algorithm/idea.

The courts have also held that a claim may not preempt ideas, laws of nature or natural phenomena. The concern over preemption was expressed as early as 1852. See *Le Roy v. Tatham*, 55 U.S. 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."); *Funk Brothers Seed Co. v. Kalo Inoculant*

Art Unit: 2112

Co., 333 U.S. 127, 132, 76 USPQ 280, 282 (1948) (combination of six species of bacteria held to be nonstatutory subject matter).

**>Accordingly, one may not patent every “substantial practical application” of an idea, law of nature or natural phenomena because such a patent would “in practical effect be a patent on the [idea, law of nature or natural phenomena] itself.” *Gottschalk v. Benson*, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

The Applicant contends, “In view of the arguments present above, Kim fails to disclose at least the steps of calculating an address compensation factor for compensating the interim address in accordance with a column formed with the real value of the remainder R, and generating a read address by adding the interim address and the address compensation factor. Further, as discussed above, the recited steps claim 1 cannot be considered obvious in view of Kim. Because Kim fails to describe or suggest at least these recited features, there is no basis for a double patenting rejection.

Applicants respectfully request the Examiner reconsider and withdraw the nonstatutory double patenting rejection of claim 1”.

The Examiner disagrees and asserts that claim 5 in U. S. Patent No. US 6668350 B1 explicitly recites, “calculating a third variable r corresponding to a remainder obtained by dividing a reading sequence K by the second variable J”.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 2112

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-16, 33 and 34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Nowhere does the specification teach “wherein the symbol codes are written in the format of a $2^m * J$ matrix”.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16, 33 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim recites, “generating an interim address by bit reversal order (BRO) operation on an index of a code symbol ***assuming that the value of the remainder R is O***”

[Emphasis added].

The Examiner asserts methods are defined by steps used to carry out a method and it is not clear how “***assuming that the value of the remainder R is O***” results in a distinguishing step from simply “generating an interim address by bit reversal order (BRO) operation on an index of a code symbol”.

The term “*in accordance with*” in claim 1 is a relative term which renders the claim indefinite. The term “*in accordance with*” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Since “*in accordance with*” is a relative term it does not set for the relationship between “*an address compensation factor for compensating the interim address*” and “*a column formed with the real value of the remainder R*”.

Claim 1 recites the limitation “*the real value of the remainder R*” in lines 10-11. There is insufficient antecedent basis for this limitation in the claim.

Claims 1-16, 33 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements.

Claims 1-16, 33 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

Claim 1 recites, “A method for reading code symbols by deinterleaving to decode an encoder packet in a receiver for a mobile communication system supporting interleaving”.

Nowhere does claim 1 recite the connection between “reading the code symbol written in the generated read address” and decoding “encoder packet in a receiver for a mobile

Art Unit: 2112

communication system supporting interleaving". The claims instead are directed solely to an abstract method for calculating an address to read abstract data out of a matrix array and not to decoding "encoder packet in a receiver for a mobile communication system supporting interleaving".

In addition, as per claim 1: The Examiner asserts methods are defined by steps used to carry out a method and it is not clear how "***assuming that the value of the remainder R is 0***" results in a distinguishing step from simply "generating an interim address by bit reversal order (BRO) operation on an index of a code symbol".

Omitted are distinguishing steps for differentiating from simply "generating an interim address by bit reversal order (BRO) operation on an index of a code symbol".

The term "*in accordance with*" in claim 1 is a relative term which renders the claim indefinite. The term "*in accordance with*" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Since "*in accordance with*" is a relative term it does not set for the relationship between "*an address compensation factor for compensating the interim address*" and "*a column formed with the real value of the remainder R*". Omitted are distinguishing steps for that set forth the relationship for implementing a step for calculating "*an address compensation factor for compensating the interim address*" "***in accordance with***" "*a column formed with the real value of the remainder R*".

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-16, 33 and 34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1 recites, "A method for reading code symbols" in the preamble.

The limitations in claim 1 are directed to an abstract mathematical algorithm of generating an abstract binary address number value intended for use in a abstract method for reading data intended for use in implementing an abstract algorithm for rearranging data.

Examiner asserts that the claims are directed to an abstract method for calculating an address to read abstract data out of a matrix array. The method can be performed entirely in software or by hand.

The Examiner asserts that regardless of the intended use, the algorithm presented in claims 1-16, 33 and 34 is explicitly taught as and directed to a method for rearranging data by retrieving/reading data from a matrix/array/memory in a particular order.

That the abstract method for calculating an address to read abstract data out of a matrix array can be useful in real world applications does not mean calculating an address to read abstract data out of a matrix array done solely for the purpose of calculating an address and reading abstract data out of an abstract matrix array

Art Unit: 2112

provides nay utility. Since the claims themselves are only directed to calculating an address and reading abstract data out of an abstract matrix array, the claims themselves by themselves do not provide any utility, do not teach any connection to real world applications and unless they are used in some other useful algorithm not recited in the claims and probably not taught in the specification. The claim limitations of claims 1-16, 33 and 34 are still directed to an abstract method for calculating an address to read abstract data out of a matrix array.

The claims as written attempt to gain a patent on every “substantial practical application” of an abstract mathematical algorithm/idea.

The courts have also held that a claim may not preempt< ideas, laws of nature or natural phenomena. The concern over preemption was expressed as early as 1852.

See Le Roy v. Tatham, 55 U.S. 156, 175 (1852) (“A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.”); Funk Brothers Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 132, 76 USPQ 280, 282 (1948) (combination of six species of bacteria held to be nonstatutory subject matter).

****>**Accordingly, one may not patent every “substantial practical application” of an idea, law of nature or natural phenomena because such a patent would “in practical effect be a patent on the [idea, law of nature or natural phenomena] itself.” Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

Simply put, claims that describe features in the Applicant’s specification at the Abstract level without any regard to function or utility are nonstatutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by TIA/EIA/IS-2000.2-A-1 (TIA/EIA/IS-2000.2-A-1, "Physical Layer Standard for CDMA2000 Spread Spectrum Systems", TELECOMMUNICATIONS INDUSTRY ASSOCIATION, November 2000).

35 U.S.C. 102(b) rejection of claim 1.

Footnote 12 on page 2-111 of TIA/EIA/IS-2000.2-A-1 substantially teaches interleaving a sequence of length N_{turbo} by substantially mapping the N_{turbo} bits to a $2^5 \times 2^n$ array comprising 2^{n+5} positions in the array whereby $2^{n+4} \leq N_{\text{turbo}} \leq 2^{n+5}$; hence the sequence of length N_{turbo} is substantially mapped to $N_{\text{turbo}} = 2^{n+4} + R = 2^5 2^{n-1} + R$ positions in the $2^5 \times 2^n$ array where R is the number of remainder bits exceeding the first 2^{n-1} columns and partially filling the remaining array.

TIA/EIA/IS-2000.2-A-1 generating an interim address by bit reversal order BRO operation on an index of a code symbol assuming that the value of the remainder R is 0 (Bit reverse in Figure 2.1.3.1.4.2.3-1 and in step 6 on page 2-111 of TIA/EIA/IS-2000.2-A-1 is performed exactly the same way for each address positions as if the remainder R

Art Unit: 2112

is 0 regardless of the actual value of the remainder R ; $i_0 \dots i_4$ in Figure 2.1.3.1.4.2.3-1 is an interim address); calculating an address compensation factor for compensating the interim address in accordance with a column formed with the real value of the remainder R (the Multiply and Select block of Figure 2.1.3.1.4.2.3-1 and in step 5 on page 2-111 of TIA/EIA/IS-2000.2-A-1 is a step for an address compensation factor $t_{n-1} \dots t_0$ for compensating the interim address $i_0 \dots i_4$ in accordance with a column formed with the real value of the remainder R ; Note: step 8 on page 2-111 of TIA/EIA/IS-2000.2-A-1 teaches that all addresses are retained including those in accordance with a column formed with the real value of the remainder R); and generating a read address by adding the interim address and the address compensation factor for the code symbol (see output of Figure 2.1.3.1.4.2.3-1 on page 2-111 of TIA/EIA/IS-2000.2-A-1), and reading the code symbol written in the generated read address (see Turbo Interleaver in Figure 2.1.3.1.4.2.1-1 on page 2-109 of TIA/EIA/IS-2000.2-A-1).

35 U.S.C. 102(b) rejection of claim 2.

Footnote 12 on page 2-111 of TIA/EIA/IS-2000.2-A-1 substantially teaches interleaving a sequence of length N_{turbo} by substantially mapping the N_{turbo} bits to a $2^5 \times 2^n$ array comprising 2^{n+5} positions in the array whereby $2^{n+4} \leq N_{\text{turbo}} \leq 2^{n+5}$; hence the sequence of length N_{turbo} is substantially mapped to $N_{\text{turbo}} = 2^{n+4} + R = 2^5 2^{n-1} + R$ positions in the $2^5 \times 2^n$ array where R is the number of remainder bits exceeding the first 2^{n-1} columns and partially filling the remaining array.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected on the ground of nonstatutory double patenting over claim 5 of U. S. Patent No. US 6668350 B1 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: claim 5 of U. S. Patent No. US 6668350 B1 clearly suggests generating an interim address by bit reversal order, BRO, operation on an index of a code symbol (BRO(K/J) is an interim address of a bit reversal order, BRO, operation on an index of a code symbol); calculating an address compensation factor for compensating the interim address in consideration of the remainder ($2^m(K \bmod J)$) is an address compensation factor for compensating the interim address in consideration

Art Unit: 2112

of the remainder $K \bmod J$); and generating a read address by adding the interim address to the address compensation factor for the code symbol $(BRO(K/J) + (2^m(K \bmod J))$ is a read address calculated by adding the interim address $(BRO(K/J))$ to the address compensation factor $(2^m(K \bmod J))$ for the code symbol).

In addition, claim 5 in U. S. Patent No. US 6668350 B1 explicitly recites, "calculating a third variable r corresponding to a remainder obtained by dividing a reading sequence K by the second variable J ".

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2112

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joseph D Torres
Primary Examiner
Art Unit 2112

/Joseph D Torres/
Primary Examiner, Art Unit 2112